L 63800-65 EWT(d)/EWT(l)/EWT(m)/EWP(o)/EEC(k)-2/EWP(n)-2/EWP(j)/T/EWG(r) TJ

ACCESSION NR: AP5018090 UR/0020/65/163/001/0157/0160

AUTHOR: Shablya, A. V.; Lashkov, G. I.; Terenin, A. N. (Academician)

TITLE: Spectral investigation of the reversible phototransfer of protons in the sublimated binary films of organic compounds at low temperatures

SOURCE: AN SSSR. Doklady, v. 163, no. 1, 1965, 157-160

TOPIC TAGS: fluorescence spectrum, proton phototransfer, proton donor, proton acceptor, acid strength, hydrogen bond, vacuum sublimation, reversible phototransfer, excess oscillation energy, excited state, photon emission

ABSTRACT: Proton phototransfer, first revealed by the reversible change in the luminescence spectrum of a film of acridine sublimated together with solid acids, when shortwave UV light deprotonized the acridine cation in a vacuum at T = 90°K, the cation being subsequently regenerated by heating of the film to T = 298°K in darkness (A.N.Terenin, A.V.Karyakin, DAN,8,425,1947), was later found also to exist under the same conditions between "amphoteric" molecules with both antidonor and anti-acceptor groups at their ends. Subsequently it was discovered that in liquid and frozen solutions the proton affinity of the acceptors and donors in the excited

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state differs from that in the non-excited state. In this connection, the authors investigated the vacuum deposition of donor-acceptor mixtures on using 3,6-diamino-acridine and 3-aminoacridine as the bases, i.e. the proton acceptors and 2-naphthol and oxalic and salicyclic acids as the proton donors and employing the vacuum sublimation of both components. The sublimated film was exposed to 298°K for 15 minutes in darkness, whereupon it was illuminated with a mercury lamp, reheated, and refrozen, with corresponding changes in the measured fluorescence spectra. The stages of the process of formation of the hydrogen bond during cooling and the transition of the proton under illumination from salicylic acid and 2-naphthol to 3,6-diaminoacridine could be traced in nonpolar solvents. The experiments revealed that thermal energy at room temperature is sufficient for the transfer of the proton from a strong acid to an acridine base. At 90°K in the rigid sublimated film there is a need for an excess oscillational energy imparted to the hydrogen bond $-O^{-}...H^{+}-A$, for the transfer of the proton to the anion. When selecting organic acids as the proton donors, strength of the acid, pK, may tentatively be used as the criterion of the behavior of these acids in crystalline state. Schematically, the reversible phototransfer of the proton from AH^{+} to O^{-} may proceed in two ways: in the fundamental state, immediately following the act of the emission of the proton $h\nu'$ by the protonized acceptor, or, in the excited state of the protonized acceptor, owing to the excess oscillational energy on excitation by larger photon...

L 00800-65

ACCESSION NR: AP5018090

The direction in which the proton phototransfer reaction proceeds depends on the ratio between the acid and basic properties of the interacting molecules in the fundamental and excited states and is determined by two processes: the utilization of the excess oscillational energy in the fundamental or excited states in order to overcome the barrier, and the change in the donor-acceptor properties of molecules in excited state. Orig. art. has: 3 figures.

ASSOCIATION: none

SUBMITTED: 29Mar65 ENCL: 00 SUB CODE: NP, OP

NO REF SOV: 002 OTHER: 007

Card 3/3

LASHKOV, I.

At remote outposts. Kryl.rod. 14 no.6:36-37 Je '63. (MIRA 16:7)
(Aeronautics, Military)

ACC NR: AP7001405 (A) SOURCE CODE: UR/0413/66/000/021/0107/0108

INVENTOR: Lashkov, K. A.; Klimova, T. N.; Fomichev, V. A.; Matsyuk, L. N. Kolobkov, Yu. M.

ORG: none

TITLE: Device for heat-pulse welding of polymer films. Class 39, No. 187991

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 21, 1966, 107-108

TOPIC TAGS: polymer film, polymer heat resistance, ~~film welding, heat pulse~~ welding equipment ~~device, closed contour article, curvilinear lap weld~~

ABSTRACT: An Author Certificate has been issued for a device for heat-pulse welding of polymer films. The device consists of two insulation blocks, heating elements

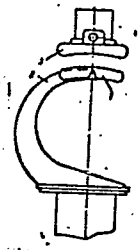


Fig. 1.

1 - Bottom block; 2 - s-shaped support; 3 - top block.

Card 1/2 UDC: 621.791.46.052.2.037

ACC NR: AP70001405

in the form of metal strips with copper inserts, and a support. To obtain closed-contour articles with a curvilinear lap weld, the blocks have a surface curvature corresponding to that of the articles to be welded, and the bottom block is mounted on an s-shaped support. Orig. art. has: 1 figure. [BO]

SUB CODE: 11, 13/ SUBM DATE: 15Aug63/ ATD PRESS: 5109

Card 2/2

POLYAKOV, L.Ye., kand.med.nauk, LASHKOV, K.V.

History of the establishment of Soviet public health statistics (1917-1920). Sov.zdrav. 17 no.7:49-53 Jl '58 (MIRA 11:8)

1. Iz kafedry organizatsii meditsinskogo obespecheniya voysk Voyenno-meditsinskoy ordena Lenina akademii imeni S.M. Kirova.
(SANITATION, hist.
sanitary statist. (Rus))
(STATISTICS,
sanitary statist., hist (Rus))
(PUBLIC HEALTH, statist.
in Russia (Rus))
(VITAL STATIST.,
same (Rus))

POLYAKOV, L.Ye., kand.med.nauk, LASHKOV, K.V.

Work of P.I. Kurkin, in military medical statistics and sanitary demography on the 100th anniversary of his birth. Sov.zdrav. 17 no.8:39-43 Ag '58 (MIRA 11:9)

1. Iz Voyenno-meditsinskoy ordena Lenina akademii imeni S.M. Kirova.
(KURKIN, PETR IVANOVICH, 1858-1934)
(STATISTICS,
med., contribution of P.I. Kurkin (Rus))

LASHKOV, K.V., podpolkovnik meditsinskoy sluzhby; KAPUTIN, V.I., mayor meditsinskoy sluzhby; FLORYA, A.A., starshiy leytenant meditsinskoy sluzhby; BANDURIN, V.I., kapitan meditsinskoy sluzhby

Method of keeping medical records at mobile medical stations. Voen.-med.zhur. no.6:15-16 Je '59. (MIRA 12:9)
(MEDICINE, MILITARY AND NAVAL
disposal of documents at mobile med. stations
(Rus))

GRIGOR'YEV, A.N., prof., gvardii general-mayor meditsinskoy sluzhby; GAVRILOV, O.K., dotsent, polkovnik meditsinskoy sluzhby; POLYAKOV, L.Ye., dotsent, mayor meditsinskoy sluzhby; LASHKOV, K.V., podpolkovnik meditsinskoy sluzhby

Cybernetics and problems of administration in medical service. Voen.-med.zhur. no.6:76-80 Je '59. (MIRA 12:9)

(CYBERNETICS
in military med. (Rus))
(MEDICINE, MILITARY AND NAVAL
cybernetics in military med. (Rus))

POLYAKOV, L.Ye., dotsent; LASHKOV, K.V.

Work of N.I. Teziakov in the field of military sanitation and sanitary statistics. Gig. i san. 25 no.4:58-62 Ap '60.
(MIRA 13:8)

1. Iz Voyenno-meditsinskoy ordena Lenina akademii imeni S.M.Kirova.
(TEZIAKOV, NIKOLAI IVANOVICH, 1859-1925)

ASHMARIN, Igor' Petrovich; VOROB'YEV, Anatoliy Andreyevich; LASHKOV, K.V., red.; SAFRONOVA, I.M., tekhn. red.

[Statistical methods in microbiological research] Statisticheskie metody v mikrobiologicheskikh issledovaniiakh. Leningrad, Medgiz, 1962. 179 p. (MIRA 16:4)
(MEDICAL MICROBIOLOGY) (BIOMETRY)

BELITSKAYA, Yevgeniya Yakovlevna; LASHKOV, K.V., red.; SAFRONOVA, I.M., tekhn. red.

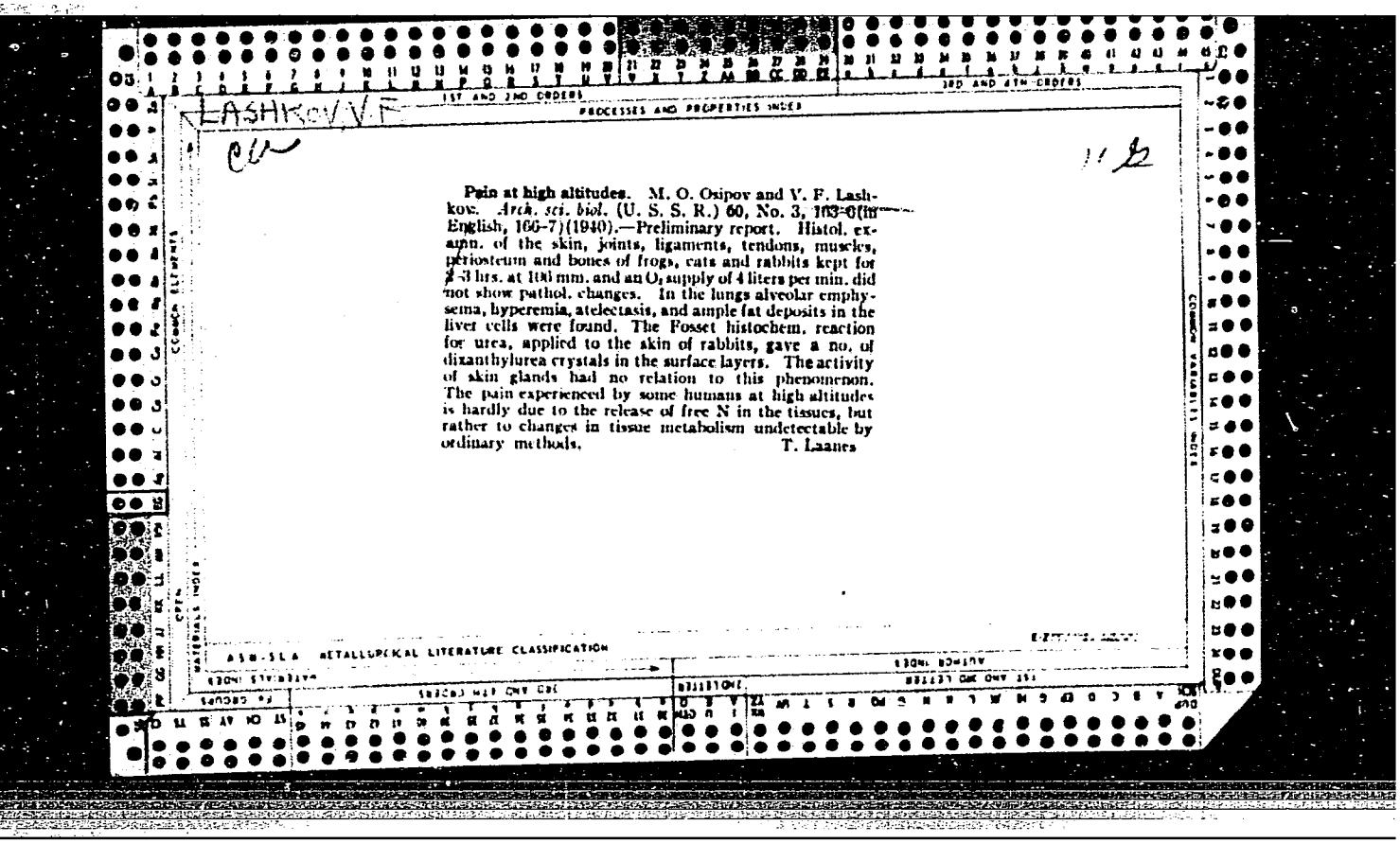
[P.I.Kurkin; his life and activities] P.I.Kurkin; zhizn' i deiatel'nost', 1853-1934. Leningrad, Medgiz, 1963. (MIRA 16:7)

(KURKIN, PETR IVANOVICH, 1858-1934)
(PUBLIC HEALTH)

LASKOV, Boris Izrailevich; GOTOVTSEV, P.I., red.; BALDINA, N.F., tekhn. red.

[Problems in enuresis]Problemy enureza. Moskva, Medgiz, 1962. 189 p. (MIRA 15:8)

(URINE—INCONTINENCE)



LASHKOV, V. F.

PROCESSES AND PROPERTIES INDEX

Pain at high altitudes. M. O. Osipov and V. F. Lashkov. *Arch. sci. biol.* (U. S. S. R.) 60, No. 3, 103-6(in English, 166-7)(1940).—Preliminary report. Histol. examn. of the skin, joints, ligaments, tendons, muscles, periosteum and bones of frogs, cats and rabbits kept for 2-3 hrs. at 100 mm. and an O_2 supply of 4 liters per min. did not show pathol. changes. In the lungs alveolar emphysema, hyperemia, atelectasis, and ample fat deposits in the liver cells were found. The Fosset histochem. reaction for urea, applied to the skin of rabbits, gave a no. of dixanthylurea crystals in the surface layers. The activity of skin glands had no relation to this phenomenon. The pain experienced by some humans at high altitudes is hardly due to the release of free N in the tissues, but rather to changes in tissue metabolism undetectable by ordinary methods. T. Laanes

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

LASHKOV, V. F.

PA 49/49T70

USSR/Medicine-Nervous System, Physiology Nov/Dec 48
Medicine-Nerves, Sensory

"Sensory Innervation of the Arbor Alveolaris," V. F. Lashkov, Lab of Neurohistol imeni B. I. Lavrent'yev, Inst of Normal and Path Morph, Acad Med Sci USSR, 4½ pp

"Ir Ak Nauk SSSR, Ser Biol" No 6

Describes experiments on cats. Method used was E.I. Shovskiy-Gros modification in silver impregnation. Discovered three types of sensitive nerve endings in alveolar tissue of the lungs. Describes

49/49T70

USSR/Medicine-Nervous System, Physiology Nov/Dec 48
(Contd)

each type. Their sensitivity is disrupted when the rendering nerve is severed. Submitted 29 Jan 48.

49/49T70

LASHKOV, V. F.

Afferent cerebrospinal innervation of the lungs. Arkh. anat., Moskva 29 no.5:31-42 Sept-Oct 1952. (CLML 23:2)

1. Of the Institute of Normal and Pathological Morphology (Director -- Academician A. I. Abrikosov) of the Academy of Medical Sciences and of the Laboratory of Neurohistology imeni B. I. Lavrent'yev (Head -- Ye. K. Plechkova).

LASHKOV, V.F.

Morphology of receptors of the vocal muscles. Arkh. anat. gist. i embr. 32 no.4:29-35 O-D '55. (MIRA 9:5)

1. Iz laboratorii neyrogistologii imeni B.I. Lavrent'yeva (zav.-Y.K. Plechkova) Instituta fiziologii AMN SSSR (dir.-deystv. chlen AMN SSSR prof. V.N. Chernigovskiy)

(VOCAL CORDS, innervation,
receptors, histol. aspects)
(NERVE ENDINGS,
vocal cord receptors, histol. aspects)

LASHKOV, V. F., Doc Med Sci, "Morphology of Innervation of the Respiratory Organs of Mammals and human." Moscow, 1961. (Acad Med Sci USSR). (KL, 2-61, 216).

LASHKOV, V.F. (Moskva, Karmanitskiy per., 3, kv.4)

Innervation of the mucous membrane of the respiratory zone of the nose. Arkh. anat. gist. i embr. 41 no.10:78-84 O '61.
(MIRA 14:12)

1. Laboratoriya neyrogistologii imeni B.I.Lavrent'yeva (zav. - Ye.K.Plechkova) Instituta normal'noy i patologicheskoy fiziologii AMN SSSR.

(NOSE--INNERVATION)

[redacted], Vladimir Fedorovich; SERGEYEV, Yu.P., red.; KOROLEV, A.V., tekhn. red.

[Innervation of the respiratory organs] Innervatsiia organov dykhaniia. Moskva, Medgiz, 1963. 248 p. (MIRA 16:8)
(RESPIRATORY ORGANS--INNERVATION)

LASHKOV, V.F.

Effector innervation of extramural sympathetic ganglia in man and other mammals. Trudy Inst.norm.i pat.fiziol. AMN SSSR 7:63 '64. (MIRA 18:6)

1. Laboratoriya neyrogistologii imeni B.I.Lavrent'yeva (zav. - prof. Ye.K.Pleshkova) Instituta normal'noy i patologicheskoy fiziologii AMN SSSR.

L 57777-65

ACCESSION NR: AR5014259 UR/0285/65/000/005/0014/0014
621.438.001.24

SOURCE: Ref. zh. Turbostroyeniye. Otdel'nyy vypusk, Abs. 5.49.91

14
B

AUTHOR: Lashkov, V.N.

TITLE: An approximate method of plotting gas flow in an interblade channel of arbitrary shape

CITED SOURCE: Tr. Tsentr. n.-i. avtomob. i avtomotorn. in-ta, vyp. 67, 1964, 42-63

TOPIC TAGS: flow problem, streamline flow, interblade channel configuration, Dirichlet problem, net-point solution method, gas turbine

TRANSLATION: The report considers a problem on the non-turbulent flow of an ideal compressible liquid in the flow channel of a plane turbine lattice, in layers of constant or variable depth. The lattice is replaced by a channel formed by the interblade passage and sectors of straight lines projecting from the entry and exit edges at assigned angles of flow entry and exit. The channel terminates in this case at a distance of $(0.5 - 1)t$ from the edges, where t is the pitch of the lattice. In this formulation, the flow problem is reduced to solving a Dirichlet problem in a simply

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ACCESSION NR: AR5014259

connected region for the equation $\frac{\partial^2\psi}{\partial Z^2}+\frac{1}{r^2}\frac{\partial^2\psi}{\partial\varphi^2}-\frac{\partial \ln\rho}{\partial Z}\frac{\partial\psi}{\partial Z}-\frac{1}{r^2}\frac{\partial \ln\rho}{\partial\varphi}\frac{\partial\psi}{\partial\varphi}=0,$

where ψ is the flow function. The problem is solved by means of the net-point method. In the cited calculation example for a nozzle lattice with a flow departure angle $\alpha_1 = 11°$, the author employed four approximations to attain a convergence accuracy $\varepsilon = 10^{-4}$ at $\psi \sim 1$. Calculated results in the form of the velocity distribution along the profile boundary are compared with results obtained by employing the channel methods of Flugel and A.N. Sherstyuk. Bibl. with 9 titles. Ya. Sirotkin

SUB CODE: PR, TD ENCL: 00

Card 2/2

LASHKOVA, L.P.

8

The reaction of the double fluoride of uranium(IV) and ammonium with solutions of alkali carbonates. D. V. An- [illegible] P. V. Vasilikov, A. D. Valmanova, L. P. Lashkova, [illegible] M. Tomachev. *Trudy Radiev.* [illegible] *in. V. G. Khlopina, Khim. i Geokhim.* 7, [illegible] (1956). — Cold concd. solns. of Na_2CO_3, $NaHCO_3$, $(NH_4)_2CO_3$, and K_2CO_3 are good solvents for the double fluoride of U(IV) and ammonium. The clear dark-green soln. obtained changes with time to yellow owing to oxidation of U(IV) to U(VI). On diln. of the soln. with water about 10 times, complete hydrolysis and pptn. of uranium is noted. Weak acid causes pptn. of uranium but excess of acid redissolves the ppt. Excess of AcOH does not dissolve the ppt. and complexes are formed with oxalic acid. Upon addn. of a strong base a complex of fluorocarbonate is formed probably with formula $M_3[UF_4(HCO_3)]$, where M is Na^+ or NH_4^+. Soln. and oxidation occur simultaneously. In 1 hr. the soly. reaches max., and 5% of U(IV) is oxidized to U(VI). The oxidation of U(IV) to U(VI) in sealed tubes without air, is partly photochem., and probably reduction of H_2CO_3 to HCOOH occurs. G. Melnyk

4E3d

1/1

VOLODCHENKO, K.G.; BONAS, O.V.; ISAKOV, L.I.; SMIRNOV, V.A.; KUNICHENKO, M.S.; LASHKOVA, Ye.A.; UVAROVA, N.A.; CHEVOTKINA, M.A.; NIKOLAYEV, P.S., glavnyy red.; SEREBRYAKOV, L.P., glavnyy red.; DERZHAVINA, N.G., red.; GUROVA, O.A., tekhn.red.; IVANOVA, A.G., tekhn.red.

[ENV unified production norms for operations in geological prospecting; mining operations] Edinye normy vyrabotki na geologorazvedochnye raboty (ENV); gornoprokhodcheskie raboty. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po geol. i okhrane nedr, 1959. 123 p. (MIRA 13:6)

1. Russia (1923- U.S.S.R.) Ministerstvo geologii i okhrany nedr. 2. Otdel ekonomiki geologorazvedochnykh rabot Vsesoyuznogo nauchno-issledovatel'skogo instituta mineral'nogo syr'ya (VIMS) (for Volodchenko, Bonas, Isakov, Smirnov, Kunichenko, Lashkova, Uvarova, Chevotkina).

(Mining engineering--Standards)

LASHKU-SIMION, N.; KONSTANTINESKU, A.

"Analysis of the properties of the boiler steep plates OLK-1, 1883-50 standard at high temperatures on the basis of short testings."

TEZHKA PROMISHLENOST, Sofiia, Bulgaria, Vol. 8, no. 3, Mar. 1959

Monthly list of East Europe Accessions (EEAI), LC, Vol. 8, No. 6, Sept 59
Unclas

LASHMANOV, D.V.

Mechanization of topographic geodetic operations as a way of accelerating the production of maps. Geod. i kart. no.10:46-49 O '61. (MIRA 14:11)

(Surveying)
(Helicopters)

3(4)

AUTHOR: Lashmanov, D. V. SOV/6-59-4-10/20

TITLE: From the Experience in the Organization of Geodetic Work in the Polar Tundra (Iz opyta organizatsii geodezicheskikh rabot v zapolyarnoy tundre)

PERIODICAL: Geodeziya i kartografiya, 1959, Nr 4, pp 35-36 (USSR)

ABSTRACT: The expedition in which the author took part started the survey in the regions of the mountainous polar tundra near the seaccast in 1958. The members of the expedition had nearly no experience in these regions. In March-April, the necessary equipment, building materials, wood and food were transported to the fixed points by means of airplanes, tractors, reindeer and dog teams. The reconnaissance building brigade of N. P. Poshivalov was flown by airplane (AN-2) to the working place in March. From there, the brigade transported the cement and metal pyramids brought there in advance into the mountains by means of two dog teams. The reconnaissance work began early in May with the help of 3 pack animals. Already in August, the task planned for 7 months was finished by the brigade. The building brigade of A. G. Plechishchev who worked in the mountainous part of the tundra used the pack animals and completed the task also before due time. In addition, this brigade

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From the Experience in the Organization of Geodetic Work in the Polar Tundra SOV/6-59-4-10/20

erected a signal on a mountain of 800 m altitude. The experience made there is generalized, and some recommendations are given as follows: 1) Pack animals (horses) can be used in summer down to the seacoast for geodetic work in the mountainous polar tundra. 2) The work should be organized in such way that the base point is in the middle of the working region. 3) The geodetic work should be done in spring. About May 20, the weather is getting clear. The summer in the polar regions is rainy and cloudy. The work should be started in the valleys and low mountains. To get from the base to the working place, skis are absolutely necessary. 4) The airplanes AN-2 and LI-2 on wheels and on skis can be used as means of transportation for people. The caterpillar tractor S-80 is recommended for heavy loads (20 - 25 t). Helicopters and cross-country vehicles can be used in any place. 5) In order to guarantee successful work under the conditions prevailing there, at least 50% of the workers necessary to fulfil the task should be permanent workers. Only people in perfect health can do the work in these regions. The execution of the whole task is questionable if the workers are inadequate. 6) Wages should be paid according to the time-premium system.

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3 (4)·

AUTHOR: Lashmanov, D. V.

SOV/6-59-11-8/21

TITLE: Using Autogiros in Topographic-geodetic Work in the Mountain Tundra North of the Polar Circle

PERIODICAL: Geodeziya i kartografiya, 1959, Nr 11, pp 24-25 (USSR)

ABSTRACT: The expedition in which the author participated, was equipped with an autogiro MI-4 in April 1959. The author reports on his experiences with the autogiro and gives recommendations as to its use. From April to May the autogiro hauled freight for the field teams into areas where no other possibility of transportation is available. They could abandon the use of reindeers and the number of pack-horses was reduced by 30-35% during the summer. Transportation by tractors was reduced to a minimum and the necessary material, such as dismountable metal signaling equipment, food supplies and fuel was brought in in good time to the work sites. The bases for the autogiros were prepared in advance. Experimentally, the autogiros were also used for surveying the points of the triangulation net of 2nd and 3rd order. The aircraft was accompanied by the chief of the team; its usual freight was

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700 - 800 kg of cement, one metal pyramid and food supplies in 200 liit barrels. It is expedient to survey simultaneously the triangulation points and bring up the necessary material for the construction of the signaling equipment when using the autogiro. This work has to be carried out in the tundra regions and in the plain and hilly areas in April and May, and in the mountain tundra as from the middle of April. It would be possible to survey 40-50 points from the autogiro one month prior to the start of the construction of the signaling equipment. During summer pack-horses and autogiro MI-1 should be used for the transportation of freight weighing about 200 kg. An autogiro should always be equipped with a radio set. The sections operating far from the team bases were equipped with RPMS radio stations in 1959. They proved satisfactory in a range of 150 km.

VAKULIN, A.A.; V'YUNOV, S.F.; GORIN, T.I.; IVASHCHENKO, P.S.; KOMOVA, A.G.; KORNEYEV, V.A.; KOROSTELEVA, M.Ya.; LOBACHEV, A.Ya.; LASHMANOV, I.Ya.; MALYCHENKO, V.V.; MOROZOVA, A.M.; PANSHIN, I.A.; PROSVIROV, A.S.; ROZHKOVA, M.V.; YUROVA, N.F.; FEDORENKO, V.P.; TSEKHMISTRENKO, P.Ye.; SHEVCHENKO, I.S.; FEDOROV, N.A., red.; IZHBOLDINA, S.I., tekhn.red.

[Brief manual on the cultivation of fruits, berries, and grapes and the management of nurseries in Stalingrad Province] Kratkii spravochnik po plodovo-iagodnym kul'turam, vinogradu i pitomnikam dlia Stalingradskoi oblasti. Stalingrad, Stalingradskoe knizhnoe izd-vo, 1960. 215 p. (MIRA 14:3)

1. Stalingrad (Province) Upravleniye sel'skogo khozyaystva. (Stalingrad Province--Fruit culture)

LASHMANOVA, N.N.

"Animal kingdom of Soviet Bukovina; transactions of the expedition for comprehensive study of the Carpathians and the Carpathian Mountain region," vol. 7. Reviewed by N.N. Lashmanova. Zool. zhur. 40 no.6:949-952 Je '61. (MIRA 14:6)
(Bukovina--Zoology)

1. LASHMANOVA, T.

2. USSR (600)

4. Afforestation

7. Practice of the Solodovsk production plot of the Lenin Shelterbelt Station, Les.khoz. 6 no. 3, 1953.

9. Monthly List of Russian Accessions, Library of Congress, APRIL 1953. Unclassified.

LASHNEV, I.A., inzhener; YAKOVLEV, A.V., inzhener.

Experience with measures for combating frost in fields of hydraulic peat production. Torf.prom. 32 no.2:26-29 '55. (MLRA 8:5)

1. Shaturskiy torfotrest.
(Peat industry) (Frost)

LASHNEV, I.A., inzh.; FEOKTISTOV, S.Ye.

Automatization applied to the stock taking of milled peat in the course of its harvesting. Torf.prom. 37 no.2:1-3 '60. (MIRA 13:6)

1. Shaturskiy torfotrest.
(Peat--Harvesting) (Automatic control)

BELOKOPYTOV, I.Ye.; BERESNOVICH, V.V.; BERSHADSKIY, L.S.; VEYTS, L.F.; ZHUKOV, A.G.; IVASHECHKIN, N.V.; KUZHMAN, G.I.; LASHKEV, I.A.; MURASHOV, F.G.; NIKODIMOV, P.I.; PYATAKOV, L.V.; SAMSONOV, N.N.; SEMENSKIY, Ye.P.; SINITSYN, N.A.; SOLOPOV, S.G.; STRUKOV, B.I.; STEBIKHOV, M.I.; TSUPROV, S.A.; CHERNOV, A.A.; CHULYUKOV, M.A.

Ivan Aleksandrovich Monakin. Torf. prom. 37 no. 3:37 '60. (MIRA 14:1)

(Monakin, Ivan Aleksandrovich, 1908-1960)

LASHNEV, N.

Continuous partition and closed mappings of metric spaces. Dokl. AN SSSR 165 no.4:756-758 D '65.

(MIRA 18:12)

1. Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova. Submitted April 13, 1965.

LASHNEV, S. I.

"Questions on the Facing of Cutting Tools Used in Machining Threaded Surfaces." Cand Tech Sci, Moscow Order of Labor Red Banner Higher Technical School imeni Bauman, Main Administration of Polytechnic and Machine Building VUZes, Min Higher Education USSR, Moscow, 1955. (KL, No 16, Apr 55)

SO: Sum. No. 704, 2 Nov 55 - Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (16).

LASHNEV, S.I.

Shaping cutters for machining helical grooves for hard alloy plates. Stan. i instr. 31 no. 6:28-31 Je '61. (MIRA 14:2)
(Milling machines)

LASHNEV, S.I.

Calculating the radius of the initial circumference of toothed parts generated with hobbing cutters. Stan. i instr. 34 no.6: 23-24 Je '63. (MIRA 16:7)

(Gear cutting)

LASHNEV, S.I.

Determining transition curves and undercuts on gear wheels in machining them with rack-type tools. Stan. i instr. 35 no.12: 10-11 D '64 (MIRA 18:2)

LASHNEV, S.I., kand. tekhn. nauk, dotsent

Analytic calculation of the profile of disk tools for mashining helical surfaces. Vest. mashinostr. 45 no. 12:66-70 D '65 (MIRA 19:1)

PANKRATOV, N.S., kand.tekhn.nauk; LASHNEV, V.I., inzh.

Peat and ammonia fertilizers contributing to higher yields. Torf. prom. 37 no.3:28-30 '60. (MIRA 13:9)

1. Filial Vsesoyuznogo nauchno-issledovatel'skogo instituta torfyanoy promyshlennosti.
(Peat) (Ammonia) (Fertilizers and manures)

LASHNEV, V.I., inzh.

Production of peat mineral nitrogen fertilizers under the conditions prevailing in state and collective farms. Torf. prom. 40 no.2:25-28 '63. (MIRA 16:4)

1. Kalininskiy filial Vsesoyuznogo nauchno-issledovatel'skogo instituta torfyanoy promyshlennosti.
(Peat) (Fertilizers and manures)

BLOK, N.I.; LASHO, N.F.; KHROMOVA, O.A.

Phase analysis of nickel-beryllium alloys. Zav.lab. 27 no.3:251-252 '61.
(MIRA 14:3)

(Nickel-beryllium alloys)

LASHOV, B.

Settlement of the native population of the Far North using the example of the Nenets National Area. Izv. Vses. geog. ob-va 96 no.5:408-413 S-O '64. (MIRA 17:12)

VOLENIK, K.; VLASAKOVA, L.; VELRABOVA, Ye.; LASHTOVKOVA, O.

Using krypton adsorption to measure surface dimensions of commercial grade metals. Zashch. met. 1 no.5:565-573 S-O '65. (MIRA 18:9)

1. Gosudarstvennyy nauchno-issledovatel'skiy institut zashchity materialov imeni G.V.Akimova, Chekhoslovatskaya Sotsialisticheskaya Respublika, Praga.

LASHSHU, Bela [Lassu, Bela], inzh.mekh.

Low-speed pneumatic piston engine of new construction. Izvestiia Bany KI no.5:155-163 '61.

21(7) SOV/89-7-3-17/29

AUTHORS: Androsenko, A. L., Broder, D. L., Lashuk, A. I.

TITLE: Gamma-Rays Accompanying the Inelastic Scattering of Neutrons With Energies of 3 Mev

PERIODICAL: Atomnaya energiya, 1959, Vol 7, Nr 3, pp 268-271 (USSR)

ABSTRACT: By means of a γ-scintillation spectrometer the energies of γ-rays were measured which are produced when 3 Mev neutrons are scattered inelastically on titanium, bromine, strontium, iodine, barium, tungsten, iridium, and bismuth. For the production of the neutrons the reaction $D(d,n)He^3$ was used (the neutrons were accelerated up to 200 kev). The neutron source had an intensity of 10^7 n/sec. The crystal NaJ(Tl) with a diameter and a height of 40 mm was shielded against the γ-radiation of the accelerator, together with the corresponding light pipe and multiplier, by means of a strong lead cone. In order to reduce the influence of the neutrons scattered on the walls of the chamber, the entire measuring apparatus was suspended by nylon threads, so that it hovered freely in the middle of the room. The elements under investigation were produced in form of rings from full material, and the rings themselves were placed over the crystal during measurement. The multiplier was connected with a 128-channel amplitude

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Gamma-Rays Accompanying the Inelastic Scattering of Neutrons With Energies of 3 Mev

analyzer and a ferrite accumulator. The energy resolution of the spectrometer in the case of the γ-rays of Zn^{69} amounted to about 10%. The constancy of the neutron flux was checked by means of a boron counter. The measuring results are recorded partly graphically, and partly by tables, a number of new, hitherto unknown γ-lines being found especially in the case of titanium, strontium, iridium and bismuth. A. K. Krasin showed constant interest in this work and assisted in building up the experimental arrangement. A. N. Serbinov took part in the experiments. The results were discussed with I. I. Bondarenko and V. V. Stavinskiy. There are 4 figures, 1 table, and 4 references.

SUBMITTED: January 6, 1959

21.1310

77216
SOV/89-8-1-10/29

AUTHORS: Broder, D. L., Kondrashov, A. P., Kutuzov, A. A., Lashuk, A. I.

TITLE: Effect of Layers Containing Boron on the Yield of Secondary Gamma Radiation. Letter to the Editor.

PERIODICAL: Atomnaya energiya, 1960, Vol 8, Nr 1, pp 49-51 (USSR)

ABSTRACT: Since in most cases the size and shape of the reactor shielding is determined by the amount of hard secondary gamma radiation, the authors investigated the possibility of reducing this amount by capturing in boron carbide the thermal neutrons producing the radiation. Neutrons captured in boron cause soft γ-rays of approximately 0.5 mev, while neutrons captured in other building materials, particularly steel, produce high energy γ-radiation. The geometry of the experiment is given in Fig. 1.

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Effect of Layers Containing Boron on the Yield of Secondary Gamma Radiation. Letter to the Editor

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SOV/89-8-1-10/29

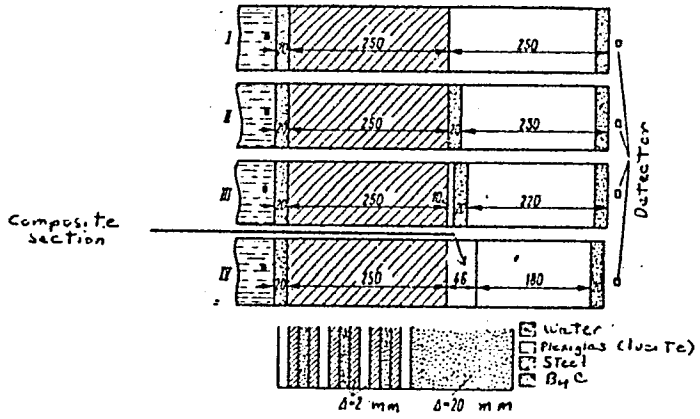

Fig. 1. Geometry of the experiment.

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The cross section of the prism was 710 x 710 mm, and the steels under investigation were St-3 and stainless steel IKh18N9T. The Po- α - Be source of $2 \cdot 10^7$ neutrons/sec strength was located in the water shielding in front of steel. Both the steel and plexiglas (lucite) had channels for indicator probes. Neutron distribution was determined using circular foils of indium 20 mm in diameter, enclosed sometimes in cadium containers. Figure 2 shows the neutron distribution in steel St-3.

Effect of Layers Containing Boron on the Yield of Secondary Gamma Radiation. Letter to the Editor

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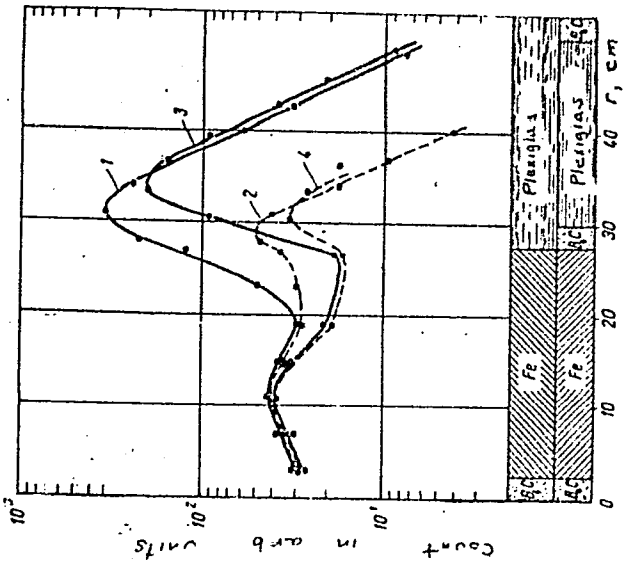

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Fig. 2. See Card 5/9 for Caption

See Card 4/9 for Fig. 2.

Fig. 2. Spacial distribution of neutrons in St-3 steel and plexiglas (lucite) prism: (1) indium measurements (no B_4C layer); (2) measurements with indium in cadmium (no B_4C layer); (3) indium measurements (between steel and plexiglas is placed a layer of B_4C 20 mm thick and of density 1.1 gm/cm^3); (4) measurements with indium in cadmium (between steel and plexiglas is placed a layer of B_4C 20 mm thick and of density 1.1 gm/cm^3).

Spectrum of γ-rays was measured by means of a NaJ(Tl) single-crystal γ-spectrometer. The diameter and height of the crystal were 40 mm. Resolving power for the Zn^{65} line was 11%. The analysis of impulses was performed by means of a 128-channel amplitude analyzer

Effect of Layers Containing Boron on the Yield of Secondary Gamma Radiation. Letter to the Editor

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with ferrite core memory. Figure 3 and 4 show the measured γ-spectra.

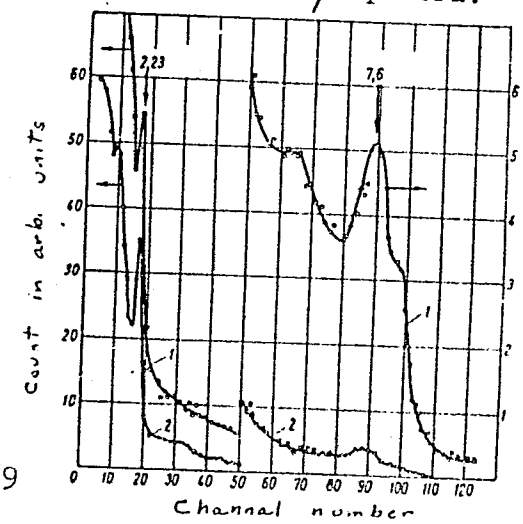

Fig. 3. Spectrum of γ-quanta produced in the St-3 steel prism: (1) No B_4C layer; (2) between steel and plexiglas (lucite) is placed a layer of B_4C, 20 mm thick and density 1.1 gm/cm^3.

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Effect of Layers Containing Boron on the Yield of Secondary Gamma Radiation. Letter to the Editor

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SOV/89-8-1-10/29

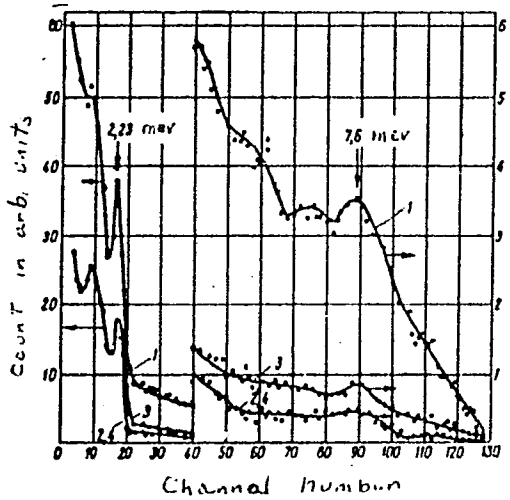

Fig. 4. Spectrum of γ-quanta produced in a prism from stainless steel IKh18N9T: (1) No B_4C layer; (2,4) between steel and plexiglas is placed a layer of B_4C (alternative II, Fig. 1), or a composite section with plexiglas, St-3 and B_4C (alternative IV, Fig. 1); (3) between steel and plexiglas is placed a layer of plexiglas and a layer of B_4C(alternative III, Fig. 1).

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Effect of Layers Containing Boron on the Yield of Secondary Gamma Radiation. Letter to the Editor

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In the case of the St-3 steel, the intensity of the 7.6 mev γ-rays is reduced 13.4 times. In the case of the steel 1Kh18N9T the reduction for the same energy is 7.8 times. This steel contains chromium and nickel, and produces some additional γ-lines. The authors calculated the decrease of the neutron capture of γ-radiations from St-3 after introduction of the boron carbide between the steel and plexiglas, using the measured neutron distribution from Fig. 2. The spectrum of neutrons in steel used in this calculation was determined approximating a half-infinite steel block with an absolutely "black" middle boundary. Corrections were made for the self-shielding of the detectors at the 1.44 ev resonance. The computed decrease of secondary γ-quanta of 9.5 times is in good agreement with the experiment on St-3. N. A. Aleshin, V. S. Borisov, G. V. Rykov, and E. V. Shestopalov were helpful during the work. There are 4 figures; and 2 references, 1 Soviet, 1 U.S. The U.S.

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Effect of Layers Containing Boron on the Yield of Secondary Gamma Radiation. Letter to the Editor

77216
SOV/89-8-1-10/29

reference is: Reactor Physics Constants, ANL-5800 (1958).

SUBMITTED: August 3, 1959

Card 9/9

85514

S/089/60/009/005/008/020
B006/B070

26.2242

AUTHORS: Androsenko, A. L. (Deceased), Broder, D. L., Lashuk, A. I.

TITLE: Gamma Rays Produced by Inelastic Scattering of 3-Mev Neutrons

PERIODICAL: Atomnaya energiya, 1960, Vol. 9, No. 5, pp. 403 - 406

TEXT: Experiments on the inelastic scattering of 3-Mev neutrons from titanium, chromium, strontium, iodine, barium, tungsten, indium, and bismuth nuclei resulting in the production of gamma rays were described by the authors of this paper in Ref.1. The gamma rays were studied and their energies determined. The present paper gives data of analogous experiments on other scatterers in the form of Tables and Diagrams. The deuterium target of an accelerator was surrounded by blocks of paraffin with admixture of boron carbide. The neutron beam was collimated through an opening 20 mm in diameter in the paraffin lithium-hydride blocks. An NaI(Tl) crystal (40 x 40 mm) and the photomultiplier were arranged in a lead chamber. The samples to be studied were attached to a thin rod

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Gamma Rays Produced by Inelastic Scattering of 3-Mev Neutrons

S/089/60/009/005/008/020
B006/B070

and placed at a distance of 4 cm from the surface of the crystal. The results obtained from a carbon scatterer were used for background correction. There are 4 figures, 1 table, and 8 references: 2 Soviet and 6 US.

SUBMITTED: July 17, 1959

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85564

S/089/60/009/005/008/020
B006/B070

Элемент Element	Энергия γ-лучей, Мэв E_γ [Mev]	Элемент Element	Энергия γ-лучей, Мэв E_γ [Mev]
Бор B	0,44±0,03 0,81±0,03 1,01±0,03 1,70±0,04	Фосфор P	1,00±0,03 1,23±0,03 2,06±0,04
Углерод C Фтор F	Не обн.	Сера S	1,25±0,03 1,82±0,04 2,14±0,04
Натрий Na	(0,64±0,03) (0,81±0,03) 1,35±0,03* 1,86±0,04*	Железо Fe	0,85±0,03 1,23±0,03 1,40±0,03 1,76±0,03
Магний Mg	0,44±0,04 1,70±0,03 1,96±0,04* 2,35±0,04	Кобальт Co	0,58±0,03 (0,87±0,03)* 1,20±0,03 1,49±0,03 1,79±0,04 2,48±0,04
Алюминий Al	0,33±0,03 0,58±0,03 0,94±0,03 1,35±0,03 1,82±0,04 2,75±0,04	Никель Ni	0,65±0,03 0,82±0,03 1,00±0,03* 1,39±0,03 1,90±0,04* 2,17±0,04
Кремний* Si	0,84±0,03 1,00±0,03 1,40±0,03 1,74±0,04 2,12±0,04	Медь Cu	0,65±0,03 0,96±0,03 1,10±0,03 1,34±0,03 1,84±0,04
Цинк Zn	1,04±0,03 1,72±0,03	Ниобий Nb	0,50±0,03 0,75±0,03 0,96±0,03 1,35±0,04*
Селен Se	0,53±0,03* 0,81±0,03* 1,01±0,03 1,33±0,03 1,74±0,04 2,20±0,04*	Молибден Mo	0,54±0,03* 0,82±0,03 1,20±0,04 1,48±0,04
Цирконий Zr	0,64±0,03* 0,84±0,03 1,04±0,04 1,26±0,04 1,72±0,04*	Кадмий Cd	0,56±0,03 1,02±0,04* 1,42±0,04* 2,11±0,04
	0,94±0,03 1,18±0,03 1,80±0,04 2,18±0,04	Олово Sn	0,86±0,03 1,20±0,04 1,75±0,04 2,06±0,04

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S/089/60/009/005/008/020
B006/B070

Сурьма Sb	0,49±0,03*	Платина* Pt	0,53±0,03
	1,01±0,03		0,85±0,03
	1,32±0,03		1,15±0,03
	1,96±0,04		
Лантан* La	0,87±0,03	Золото Au	0,23±0,03*
	1,21±0,04		0,39±0,03*
	1,78±0,04		0,84±0,03*
	2,17±0,04		1,73±0,04*
Тантал Ta	0,46±0,03	Свинец Pb	0,52±0,03
	0,87±0,03*		0,79±0,03
	1,18±0,04*		1,05±0,03
	1,82±0,04*		1,37±0,03
			2,64±0,04

Legend to Table:

The data with asterisks are published for the first time in the present paper.

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S/048/61/025/002/016/016
B117/B212

AUTHORS: Broder, D. L., Lashuk, A. I., Sadokhin, I. P.

TITLE: Gamma-radiation yield in inelastic scattering of neutrons on antimony nuclei

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, v. 25, no. 2, 1961, 309-312

TEXT: The present paper was read at the 11th Annual Conference on Nuclear Spectroscopy (Riga, January 25 to February 2, 1961). The authors have investigated the yield of 1.01-Mev gamma quanta which are produced in inelastic scattering of neutrons on antimony nuclei. In these tests annular geometry was used (Fig. 1). 30 mm high rings (3) with an outer diameter of 85 mm and an inner diameter of 60 mm served as scattering specimens. A lead cone (2), height 360 mm, base diameter of 58 mm shielded the crystal against direct radiation. The gamma-radiation spectrum was investigated by means of a scintillation gamma spectrometer with a 40 by 40 mm NaI(Tl) crystal with a relative half-width of the Zn^{65} lines (1.12 Mev) of about 9% (ФЭУ - photomultiplier). The amplitude distribution of the pulses has been studied

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with a 128-channel pulse-height analyzer. The neutrons have been obtained from a $H^3(pn)He^3$ reaction on anelectrostatic generator at a proton energy of 1.5-3.3 Mev. The energy spread of the neutron beam was no wider than 30 kev. Two types of measurements have been made with and without the specimen. The given values are averaged over the two test series. The measurements with 0.9 to 2.5-Mev neutrons have confirmed the gamma lines, as given in Refs. 6-8: 0.49, 0.59, 1.01, 1.32, 1.50, 1.84, 1.96, and 2.16 Mev. A detailed investigation of the spectrum in the region of 1-1.5 Mev is very difficult due to a low intensity of the 1.32-Mev line expected. It is only mentioned that the 1.32 and 1.50 Mev-lines are excited at neutron energies of about 1.5 Mev; this indicates that the Sb^{121} and Sb^{123} nuclei might have 1.50 Mev and even 1.32 Mev levels. A 1.5 Mev cascade transition to the 0.153 Mev level, emitting 1.347 Mev gamma quanta might be possible for Sb^{123}. It has been established that antimony nuclei have an energy level near 1 Mev that is excited by an inelastic neutron scattering. For neutrons with an energy higher than 1.01 Mev, the 0.87 Mev line is visible. At higher energies this line and the 1.01-Mev line become indistinct, which is due to a low resolution of the spectrometer . Another level can be assumed near 900 kev. An other possibility would be a transition from the

Gamma-radiation yield ...

1.01-Mev excited state to the 0.153-Mev level and emission of 0.847 Mev-quanta. This is the case if the 1.01-Mev level is referred to Sb^{123} nuclei. The following can be assumed, considering the 1.01-Mev gamma yield for inelastic neutron scattering on antimony nuclei with energies of 1.0-2.5 Mev: For neutron energies between 1.0 and 1.5 Mev the curve corresponds to the excited 1.01-Mev level of antimony nuclei. A cascade transition to this level from the 1.32 Mev-level is not possible, because no gamma line with an energy near 0.3 Mev could be established in the spectra examined. Fig. 4 shows the graph for the gamma yield with an energy of 0.84 Mev for iron nuclei. The data established by the authors of this paper are plotted for 2.0-Mev electrons. The radiation sources which were used to scale the gamma spectrometer are given in the table. There are 4 figures, 1 table, and 8 references: 6 Soviet-bloc.

Legend to Fig. 1: 1) tritium target, 2) lead cone, 3) scattering ring, 4) proton beam

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Gamma-radiation yield ...

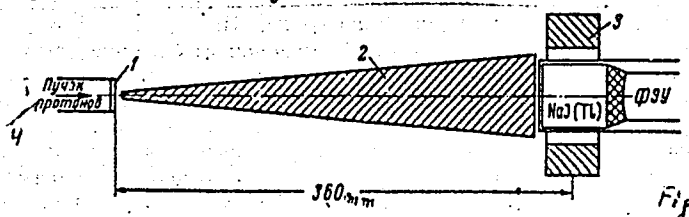

Fig. 1.

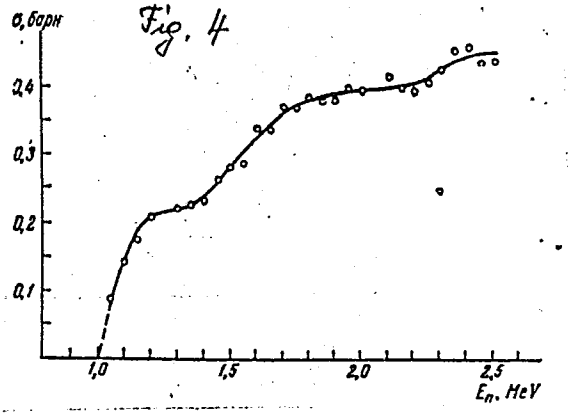

Fig. 4

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S/903/62/000/000/016/044
B102/B234

AUTHORS: Broder, D. L., Lashuk, A. I., Sadokhin, I. P.

TITLE: Excitation of the 1.01-Mev level of antimony nuclei in inelastic neutron scattering

SOURCE: Yadernyye reaktsii pri malykh i srednikh energiyakh; trudy Vtoroy Vsesoyuznoy konferentsii, iyul' 1960 g. Ed. by A. S. Davydov and others. Moscow, Izd-vo AN SSSR, 1962, 187-190

TEXT: Annular targets of Sb and C were bombarded by neutrons from $H^3(p,n)He^3$ reactions; the γ-radiation was recorded by a NaI(Tl) scintillation spectrometer with a 9% energy resolution (for 1.12-Mev quanta of Zn^{65}) whose pulses were fed to a 128-channel pulse-height analyzer. The energy dependence of the γ-quantum yield during inelastic neutron scattering was obtained with the help of a reference curve especially determined for the 0.84-Mev γ-quanta from Fe. The effectiveness of the crystal was taken into account; neutron absorption in the scatterer was neglected. The NaI(Tl) effectiveness was determined with a cascade gamma source. The spectrum of the lines excited in inelastic scattering of 3.0-Mev neutrons contained,

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besides the intense 1.01-Mev line also one at 0.49 and one at 0.59 Mev, corresponding to the 0.506 and 0.573 Mev levels, and furthermore lines at 1.32 and 1.96 Mev. The 1.32 and 1.50 Mev lines indicate the presence of 1.32 and 1.5 Mev levels at Sb^{121} or Sb^{123}. In the case of neutron energies above 1.01 Mev besides the 1.01-Mev line also one at 0.90 Mev is observed, which is due to either a 0.90-Mev level or a transition from the 1.01 to the 0.153-Mev level. The 1.01-Mev level may not be attributed to a definite Sb-isotope. There are 4 figures and 1 table.

ASSOCIATION: Fiziko-energeticheskiy institut Gosudarstvennogo Komiteta Soveta Ministrov SSSR po ispol'zovaniyu atomnoy energii (Physics and Power Engineering Institute of the State Committee of the Council of Ministers of USSR on the Utilization of Atomic Energy)

KARDASHEV, D.A.; STAVINSKIY, V.S.; BRODER, D.L.; LASHUK, A.I.; SADOKHIN, I.P.

Analysis of the excitation functions for levels of the Fe^{56} nucleus in the case of inelastic neutron scattering in an optical nuclear model. Atom.energ. 13 no.6:587-588 D '62. (MIRA 15:12)
(Iron—Isotopes) (Neutrons—Scattering)
(Nuclear optical models)

BRODER, D. L.; LASHUK, A. I.; SADOKHIN, I. P.

"Cross-section of Y-quantum yield and excitation of nuclear levels by neutron inelastic scattering."

report submitted for IAEA Intl Nuclear Data Sci Working Group Mtg, Vienna, 9-13 Nov 64.

ACCESSION NR: AP4015556 S/0089/64/016/002/0103/0110

AUTHOR: Broder, D. L.; Kolesov, V. Ye.; Lashuk, A. I.; Sadokhin, I. P.; Dovbenko, A. G.

TITLE: The cross section of the excitation levels of Mg, Cr sup 52, Ni sup 58, Ni sup 60 and Nb sup 93 in inelastic neutron scattering

SOURCE: Atomnaya energiya, v. 16, No. 2, 1964, 103-110

TOPIC TAGS: nuclear cross section, nuclear excitation level, inelastic neutron scattering, Mg, Cr sup 52, Ni sup 58, Ni sup 60, Nb sup 93

ABSTRACT: The measurements of the cross sections were made by studying the inelastic scattering of monochromatic neutrons obtained from the reactions $H^3(p,n)He^3$ and $H^2(d,n)He^3$ for energies below and above 3 Mev, respectively, and by measuring the gamma-spectra resulting from the reactions. Corrections were made for the dead time of the analyser and for the self absorption. The computation of the cross sections was based on the work by W. Hauser and H. Feshbach (Phys.

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ACCESSION NR: AP4015556

Rev. 87 (1952) 366) which used the concept of the compound nucleus and of the independence of its decay from the manner of its formation. The cross sections for the different isotopes as functions of neutron energy are given in diagrams. With the exception of Ni^{58}, the agreement is good when the energy levels of the nuclei are known. "The authors are grateful to Sh. S. Nikolayshuili for his interest and to V. V. Buly*chev, A. N. Serbinov, V. A. Romanov, and A. P. Klimov for technical help." Orig. art. has: 6 figures and 1 table.

ASSOCIATION: none

SUBMITTED: 15Apr63 DATE ACQ: 12Mar64 ENCL: 00

SUB CODE: PH NO REF SOV: 005 OTHER: 008

Card 2/2

ACCESSION NR: AT4019041 S/0000/63/000/000/0132/0142

AUTHOR: Broder, D. L.; Lashuk, A. I.; Sadokhin, I. P.; Suvorov, A. P.

TITLE: Selection of a system of excitation functions for the energy levels during inelastic scattering of neutrons by the nuclei of iron, nickel and niobium

SOURCE: Voprosy* fiziki zashchity* reaktorov; sbornik statey (Problems in physics of reactor shielding; collection of articles). Moscow, Gosatomizdat, 1963, 132-142

TOPIC TAGS: neutron, neutron scattering, inelastic neutron scattering, excitation function, Gamma ray spectrum, energy level cross section, iron nucleus, nickel nucleus, niobium nucleus, nuclear reactor, reactor shielding

ABSTRACT: Cross sections of the energy levels produced during the inelastic scattering of neutrons by the nuclei of iron, nickel and niobium were investigated by measuring the spectrum of the γ-rays created by the degradation of the excited states. The neutron sources were the reaction $T^3(p,n)He^3$ obtained in a Van der Graaf generater for the energy range 0.8-2.5 Mev and the reaction $D(d,n)He^3$ in a cascade accelerator for the range 2.5-4.0 Mev. The γ-ray spectrometer consisted of a NaI(Tl) crystal, an FEU-13 photomultiplier and a 128-channel pulse analyzer. Monitoring of the neutron flux was performed with a boron counter and a U^{235}

Card 1/ 1/2

ACCESSION NR: AT4019041

fission chamber. γ-quanta of the following energies were observed from the isotopes Fe^{56} and Fe^{54}: 0.84, 1.02, 1.23, 1.41, 1.81, 2.15 and 2.6 Mev. The plot of the cross sections and excitation levels as a function of neutron energy shows that all the γ-rays were due to inelastic neutron scattering from Fe^{56} except those at 1.41 Mev, which were produced by excitation of the first level in Fe^{54}. Inelastic scattering of neutrons by the nickel isotopes Ni^{58} and Ni^{60} produced γ-quanta with the following energies: 0.86, 1.00, 1.16, 1.33, 1.45, 1.80 and 2.20 Mev. From Nb^{93}, γ-quanta with the following energies were obtained: 0.029, 0.765 and 0.986 Mev. The sources of the various energy levels are discussed. Comparison of these results with those in the literature showed good agreement. "The authors thank V. S. Stavinskiy for evaluating the results, and Ye. V. Shestopalov, V. S. Borisov, V. A. Romanov, G. N. Deryagin and A. P. Klimov for their help in carrying out the experiments." Orig. art. has: 6 figures.

ASSOCIATION: None

SUBMITTED: 14Aug63 DATE ACQ: 27Feb64 ENCL: 00

SUB CODE: NP NO REF SOV: 009 OTHER: 023

Card 2/2

L 8685-65 AFWL/SSD

ACCESSION NR: AT4048284 S/0000/64/000/000/0001/0018

AUTHORS: Broder, D. L.; Lashuk, A. I.; Sadokhin, I. P. B

TITLE: Cross sections for the gamma yield and for the excitation of the nuclear levels in inelastic scattering of neutrons

SOURCE: Secheniya vy*khoda gamma-kvantov i vozbuzhdeniya urovney yader pri neuprugom rasseyanii neytronov *

TOPIC TAGS: gamma cross section, gamma yield, neutron scattering, inelastic scattering, nuclear level excitation

ABSTRACT: Tables are presented of the measured cross sections for the production of gamma quanta in inelastic scattering of neutrons by Mg, Cr^{52}, Fe, Ni^{58}, Ni^{60}, Zr, Nb, and Sb. The results were obtained with the aid of an NaI(Tl) crystal scintillation spectrometer. The energy resolution of the 0.661-MeV gamma line of Cs^{137} in the

Card 1/3 * [no source given]

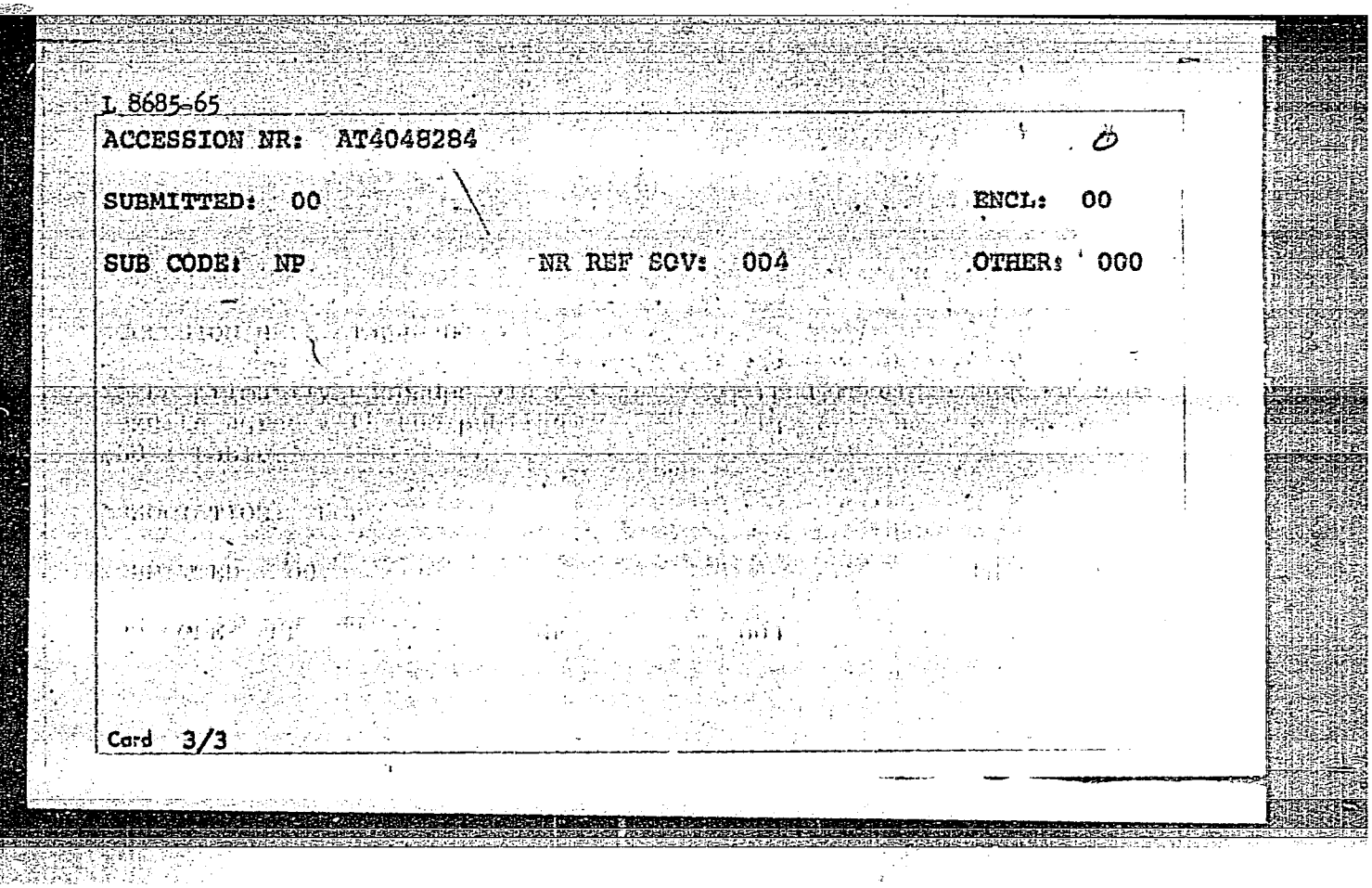
L 8685-65

ACCESSION NR: AT4048284 O

spectrometer was about 10%. Monochromatic neutrons were obtained with the aid of the reactions $H^3(p,n)He^3$ and $H^2(d,n)He^3$, in which the neutron energy spread did not exceed ±30 keV and ±100 keV, respectively. Decay schemes established by the authors and by others are used to determine the cross sections for the excitation of individual levels of Mg, Cr^{52}, Fe^{56}, Ni^{58}, Ni^{60}, Nb, and the total cross sections for inelastic scattering by Mg, Fe, Ni, and Nb. Plots of the results are presented. The results were published by the authors elsewhere (Izv. AN SSSR ser. fiz. v. 25, no. 2, 309, 1961; Atomnaya energiya v. 16, 107, 1964; Teoriya i metody* rascheta yaderny*kh reaktorov [Theory and Design of Nuclear Reactors], M. 1962, p. 254; Voprosy* fiziki zashchity* reaktorov [Problems in Reactor Shielding Physics], M. 1963, p. 132). Orig. art. has: 8 figures and 9 tables.

ASSOCIATION: None

Card 2/3



L 8685-65

ACCESSION NR: AT4048284

SUBMITTED: 00 ENCL: 00

SUB CODE: NP NR REF SOV: 004 OTHER: 000

Card 3/3

L 8686-65 EWT(m)/EWA(h) SSD/AFWL MLK

ACCESSION NR: AT4048283 S/0000/64/000/000/0001/0010

AUTHORS: Al'nikov, V. S.; Broder, D. L.; Lashuk, A. I.; Sadokhin, I. P.; Kham'yanov, L. P. B

TITLE: Gamma rays produced by capture and inelastic scattering of neutrons *

SOURCE: Gamma-luchi pri zakhvate i neuprugom rasseyanii neytronov

TOPIC TAGS: neutron capture, neutron scattering, inelastic scattering, gamma emission, gamma cross section, indium, samarium, zirconium, nickel, iron, gamma spectrum, resonance capture

ABSTRACT: The purpose of the experiments was to determine the gamma cross sections and to identify the transitions occurring between the excited levels of the target nuclei. The spectra of the gamma rays from Sm and In were measured with an NaI(Tl) scintillation spectrometer by a time-of-flight technique described elsewhere (D. Broder

Card 1/3 * [no source given]

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ACCESSION NR: AT4048283

et al., PTE, no. 1, 57, 1964). The resolution of the mechanical selector made it possible to distinguish neutron resonances in Sm and In samples up to 10--15 eV energy. The intensities of the individual lines in the low-energy part of the spectrum were determined relative to a 480-keV line measured with a "black" B^{10} sample. Data are presented on the gamma ray spectra due to capture by the first resonances of In (0.096 and 0.86 eV) and Sm (1.46 and 3.7 eV). The relative and absolute yields of the low-energy gamma rays are determined and are reconciled with the published data. It is noted that a change takes place in the high-energy part of the spectrum on going from resonance to resonance. The cross section is determined for the production of 0.84-MeV gamma quanta by inelastic scattering of neutrons having energies up to 6.26 MeV from iron. The excitation cross sections of 5 iron levels are calculated up to 4 MeV. The cross section for the production of 0.92-MeV gamma quanta on Zr are determined in the range up to 3.5 MeV. The transitions between the excited levels of Fe^{56} and Ni^{58} are identified and found

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L 8686-65

ACCESSION NR: AT4048283 O

to be primarily cascades via the first excited levels. Most of the results agree with the published data. Orig. art. has: 6 figures and 1 table.

ASSOCIATION: None

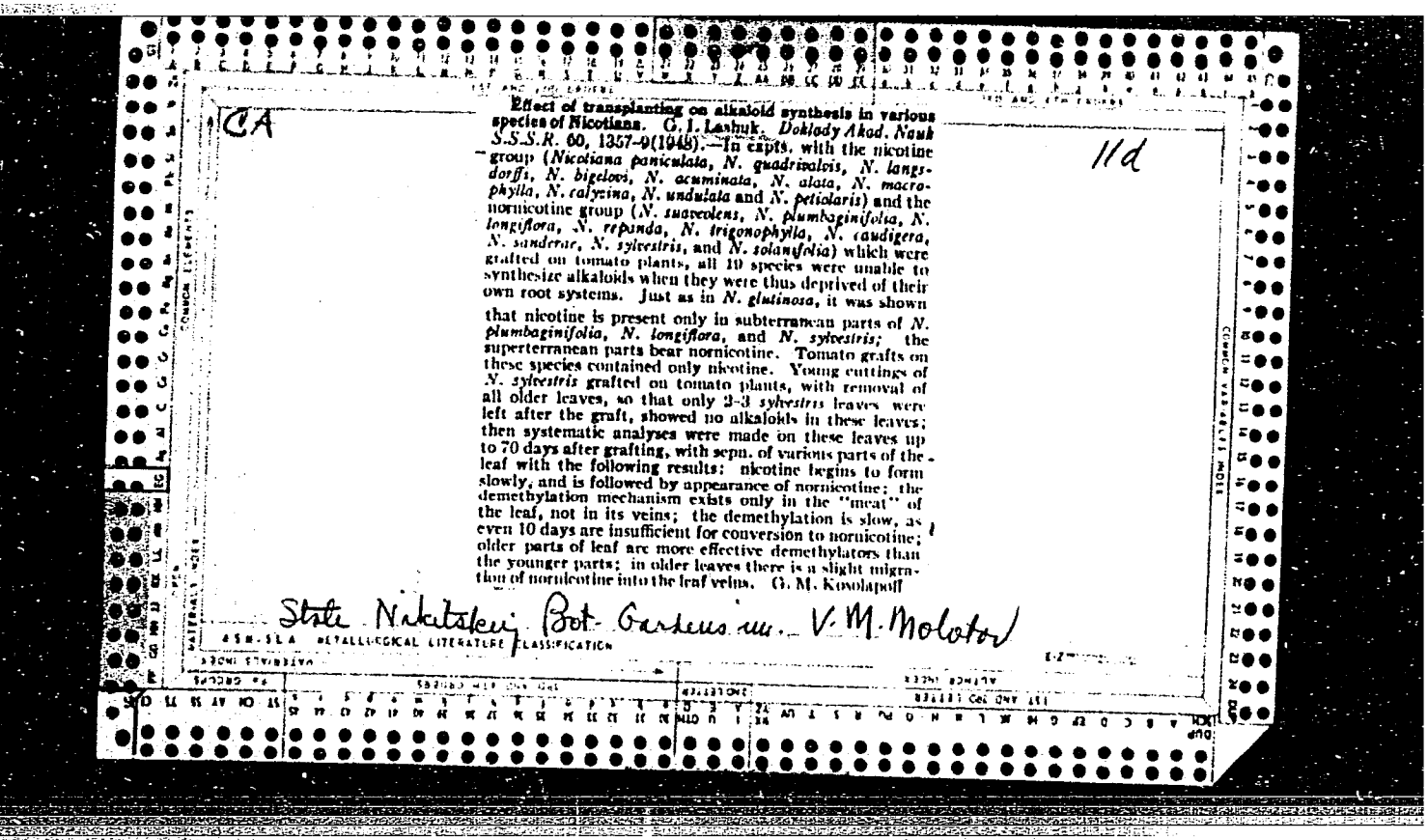
SUBMITTED: 00 ENCL: 00

SUB CODE: NP NR REF SOV: 004 OTHER: 006

Card 3/3

BRODER, D.L.; KLENOV, V.I.; LASHUK, A.I.; SADOKHIN, I.P.

Angular distribution of γ-quanta engendered in inelastic neutron scattering on iron. IAd. fiz. 2 no.5:823-825 N '65.
(MIRA 18:12)



CA

Effect of transplanting on alkaloid synthesis in various species of Nicotiana. G. I. Lashuk. *Doklady Akad. Nauk S.S.S.R.* 60, 1357-9(1948).—In expts. with the nicotine group (*Nicotiana paniculata, N. quadrivalvis, N. langsdorffi, N. bigelovi, N. acuminata, N. alata, N. macrophylla, N. calycina, N. undulata* and *N. petiolaris*) and the nornicotine group (*N. suaveolens, N. plumbaginifolia, N. longiflora, N. repanda, N. trigonophylla, N. caudigera, N. sanderae, N. sylvestris*, and *N. solanifolia*) which were grafted on tomato plants, all 10 species were unable to synthesize alkaloids when they were thus deprived of their own root systems. Just as in *N. glutinosa*, it was shown that nicotine is present only in subterranean parts of *N. plumbaginifolia, N. longiflora*, and *N. sylvestris;* the superterranean parts bear nornicotine. Tomato grafts on these species contained only nicotine. Young cuttings of *N. sylvestris* grafted on tomato plants, with removal of all older leaves, so that only 2-3 *sylvestris* leaves were left after the graft, showed no alkaloids in these leaves; then systematic analyses were made on these leaves up to 70 days after grafting, with sepn. of various parts of the leaf with the following results: nicotine begins to form slowly, and is followed by appearance of nornicotine; the demethylation mechanism exists only in the "meat" of the leaf, not in its veins; the demethylation is slow, as even 10 days are insufficient for conversion to nornicotine; older parts of leaf are more effective demethylators than the younger parts; in older leaves there is a slight migration of nornicotine into the leaf veins. G. M. Kovalapoff

11d

State Nikitskiy Bot. Gardens im. V. M. Molotov

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

USSR/Chemistry - Alkaloids, From Nicotiana Jan 49
Chemistry - Nicotiana, Alkaloids From

"Importance of Separate Parts of the Root System for Synthesis of Alkaloids in the Form of Nicotiana," G. I. Lashuk, Nikitskiy State Bot Garden imeni V. M. Molotov, 4 pp

"Dok Ak Nauk SSSR" Vol LXIV, No 1

Attempts to find (1) what section of root is dominant in process of synthesizing alkaloids, and (2) what effect the most essential functions of roots (process of mineral and water supply) have on the dependence of synthesis of alkaloids on

PA 26/49T1

USSR/Chemistry - Alkaloids, From Jan 49
Nicotiana (Contd)

the root system. Submitted 29 Sep 48.

26/49T1

LASHUK, G. I.

26/49T1

CA

11D

Variations of dominance of alkaloid content in inter-species hybrids of Nicotiana. G. I. Lashuk. *Doklady Akad. Nauk S.S.S.R.* 70, 265–8 (1950); cf. Shmuk, *Izvest. Akad. Nauk, Ser. Biol.* 1937, No. 6.—Pollination of *N. tabacum* plants by pollen from grafts of *N. glutinosa* or *N. sylvestris* on *N. tabacum* and investigation of the resulting plant generations gave the following data: The seed progeny from the grafts did not show any significant deviations of alkaloid content, even after 2–3 years of repeated graftings. However, the sexual hybrid progeny contained nicotine as the dominant alkaloid (82–94%), while the controls had nornicotine as the dominant alkaloid (91–100%). The above is obtained when the father plants of *N. glutinosa* are grafted on mother plants.
G. M. Kosolapoff

LASHUK, G. I.

Rockrose

New data on the biology of the rockrose [Cistus tauricus]. Agrobiologiia, No. 4, 1952.

Monthly List of Russian Accessions, Library of Congress, November 1952. Unclassified.

LASHUK, G. I.; SNEGIREV, D. P.

Lavender (Plant)

Selection and seed culture of lavender. Sel. i sem. 19 no. 6, 1952.

MONTHLY LIST OF RUSSIAN ACCESSIONS. Library of Congress, September 1952. UNCLASSIFIED.

1. LASHUK, G. I.

2. USSR (600)

4. Plants - Metabolism; Pollen

7. Relation of plant metabolism to physiological condition of pollen. Dokl. AN SSSR 83 no. 6, 1952. Gosudarstvehnyy Nikitskiy Botanicheskiy Sad im. V. M. Molotova rcd. 15 Nov. 1951

9. Monthly List of Russian Accessions, Library of Congress, September 1952. UNCLASSIFIED.

GUSEV, G.V., kand. biolog. nauk; LASHUK, L.I., nauchnyy sotrudnik

Invasion of the Colorado beetle in southeastern Europe. Zashch. rast. ot vred. i bol. 4 no.2:42-43 Mr-Ap '59. (MIRA 16:5)

(Europe, Eastern—Potato beetle)

VOZDIZHENSKAYA, O. M. LASHUK, L. P.

Peasantry

Some problems in the ethnographic study of collective farm peasantry. Sov. etn. no. 1, 1952.

9. Monthly List of Russian Accessions, Library of Congress, August 1953, Uncl.

LASHUK, L.P.

Sledge dog breeding in the northwestern Ural foothills. Krat.soob. Inst.etn. 20:27-34 '54. (MLRA 7:6)
(Ural Mountains--Sledge dogs) (Sledge dogs--Ural Mountains)

ACC NR: AT7003996 SOURCE CODE: UR/0000/66/000/000/0098/0104

AUTHOR: Butakov, L. D.; Lashuk, N. A.; Solntsev, B. A.; Tolmachev, V. I.

ORG: Scientific Research Institute of Nuclear Physics, Electronics, and Automation, Tomsk Polytechnic Institute (Nauchno-issledovatel'skiy institut yadernoy fiziki, elektroniki i avtomatiki pri TPI)

TITLE: High-frequency system for operating an electron synchrotron as a proton-synchrotron

SOURCE: Mezhvuzovskaya konferentsiya po elektronnym uskoritelyam. 5th, Tomsk, 1964. Elektronnyye uskoriteli (Electron accelerators); trudy konferentsii. Moscow, Atomizdat, 1966, 98-104

TOPIC TAGS: synchrotron, proton, ~~synchrotron~~ electron

ABSTRACT: Wide passband and high voltages do not permit using conventional proton-synchrotron-tape aperiodic accelerating systems. Nor can drift tubes or accelerating transformers be used. Hence, two variants of a special accelerator are proposed: (1) Two closely coupled and shunted toroidal resonators (see Fig. 1) and (2) A system of ring electrodes (see Fig. 2). The entire frequency deviation is 9 Mc, and the frequency by the end of the cycle is 36 Mc. The hf channel is divided into two subchannels: a 1.2-Mc one covering most of the cycle and a wide-band one covering the initial part of the cycle. In the ring-electrode design, all long lines are supplied

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ACC NR: AT7003996

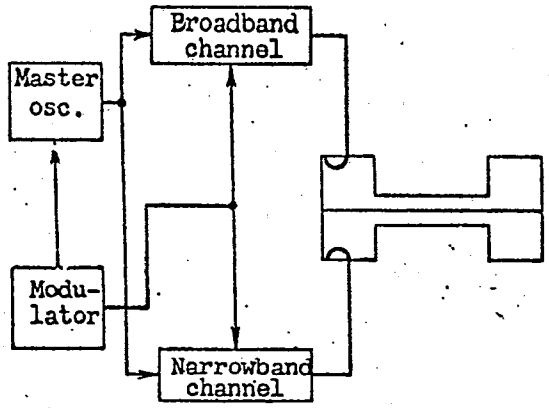

Fig. 1. Two-coupled resonator hf system

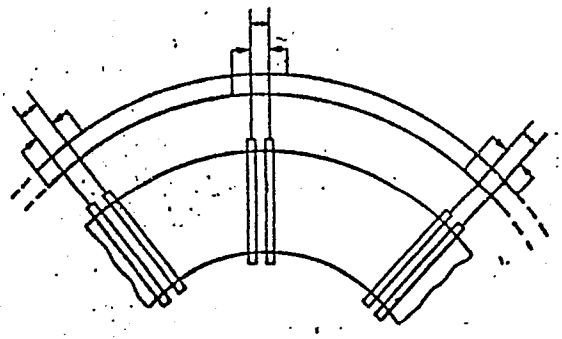

Fig. 2. Ring-electrode hf system

by a common feeder system. Some details of the electronic equipment are given. Orig. art. has: 8 figures and 6 formulas.

SUB CODE: 09, 20 / SUBM DATE: 06Mar66

Card 2/2

ACC NR: AT7003997 SOURCE CODE: UR/0000/66/000/000/0105/0111

AUTHOR: Lashuk, N. A.; Solntsev, B. A.

ORG: none

TITLE: Transients in a pulsed hf system

SOURCE: Mezhvuzovskaya konferentsiya po elektronnym uskoritelyam. 5th, Tomsk, 1964. Elektronnyye uskoriteli (Electron accelerators); trudy konferentsii. Moscow, Atomizdat, 1966, 105-111

TOPIC TAGS: cyclic accelerator, transient phenomenon, high frequency, resonator

ABSTRACT: The transient time of an accelerating voltage largely depends on the parameters of the accelerator resonator because the latter's Q-factor is considerably higher than that of the oscillator circuits. Principal and equivalent circuits of excitation of the resonator conventionally used in the vhf band are

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ACC NR: AT7003997

shown. Solution of a differential equation that describes the equivalent circuit yields formulas for the output voltage transient (settling) time. The transients in amplifier stages can be reduced by providing the modulation in the output stage. Also, a formula describing the phase variation of oscillations under transient conditions is derived. The effect of other circuits on transients is allowed for by introducing an exponential exciting emf. Under resonance conditions, only amplitude transients occur in the oscillatory system; both frequency and phase of forced oscillations are established instantaneously. Orig. art. has: 5 figures and 20 formulas.

SUB CODE: 09, 20 / SUBM DATE: 06Mar66

Card 2/2

ACC NR: AT7004003 SOURCE CODE: UR/0000/66/000/000/0249/0253

AUTHOR: Butakov, L. D.; Lashuk, N. A.; Solntsev, B. A.

ORG: none

TITLE: Shaping the long steep-front pulses

SOURCE: Mezhvuzovskaya konferentsiya po elektronnym uskoritelyam. 5th, Tomsk, 1964. Elektronnyye uskoriteli (Electron accelerators); trudy konferentsii. Moscow, Atomizdat, 1966, 249-253

TOPIC TAGS: pulse shaper, pulse shape, particle acceleration

ABSTRACT: A method is described of shaping high-power steep-front long pulses intended for anode modulation of a hf oscillator (e.g., in a synchrotron accelerator). Millisecond pulses are shaped by discharging a storage into a load via a hydrogen thyratron (G. W. Wheeler, Rev. Sc. Instr., v. 32, no. 10, 1961). To ensure short time and high efficiency, it is suggested that storage 1 (see figure) be discharged via a thyratron directly into grounded load 2. In this case, the thyratron is to be quenched by a pulse supplied by auxiliary oscillator 3. The expected pulse-rise time

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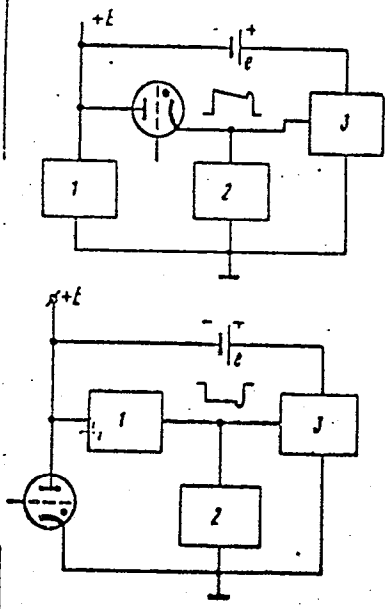
ACC NR: AT7004003



is 20—100 nsec; efficiency, near 100%. The quenching-pulse duration must be 50—500 μsec. Principal connection diagrams of such (100-kw) pulse shapers are supplied, as are four oscillograms of the pulses. Orig. art. has: 7 figures and 1 table.

SUB CODE: 09 / SUBM DATE: 06Mar66 /

ORIG REF: 001 / OTH REF: 001

Card 2/2

LASHUTIN, B.V., inzh.

Effect of the adoption of semiautomatic interlocking systems on the improvement in the traction power indices of train performance. Vest. TSNII MPS 20 no.2:27-31 '61. (MIRA 14:3)
(Railroads—Cost of operation)
(Railroads—Signaling—Centralized traffic control)